

In the claims:

1. (currently amended) A method for determining the concentration of a non-bound metal ion in a sample of ~~serum or other~~ biological fluids, the method comprising the steps of:

a) ~~providing a surface coated with a polymer-conjugated form of a metal chelator;~~

ba) ~~bringing said the sample into contact with said a coated surface coated with a polymer-conjugated form of a metal chelator, under conditions and for a period of time sufficient to allow the non-bound metal ion to be captured-chelated by the metal chelator; thereafter~~

eb) ~~bringing into contact with said coated surface, after completion of step b) above, a chelating-marker chelating an additional metal ion, said additional metal ion being chelatable-conjugated with a moiety that can be captured by the metal chelator; thereafter~~

ec) ~~determining the an amount of said chelating-marker that has been released by capture of the not chelating said additional metal ion by the coated surface; and thereafter~~

ed) based on the amount of said chelating-marker not chelating said additional metal ion, determining the concentration of the non-bound metal ion in the sample of the biological fluid, calculating the concentration of the metal ion in the sample from the concentration of binding sites left available after step b) for capturing the metal ion bound to the marker.

2. (currently amended) A method according to claim 1, wherein the non-bound metal ion is non-transferrin bound iron (NTBI).

3. (currently amended) A method according to claim 1 or 2, wherein the said polymer-conjugated form of a metal chelator is a desferrioxamine (DFO) polymer.

4. (currently amended) A method according to claim 1, wherein the said surface is a multiwell plate.

5. (currently amended) A method according to claim 1, wherein the said chelating marker is a fluorescent marker.

6. (Cancelled)

7. (Cancelled)

8. (currently amended) A method according to claim 5 ~~or 7~~, wherein the said chelating marker is a calcein-~~iron~~ complex.

9. (currently amended) A method according to claim 1, wherein the non-bound metal ion is aluminum ( $Al^{3+}$ ).

10 (cancelled)

11. (withdrawn) A polymer for use in the determination of the concentration of a non-bound metal ion in a sample of serum or other biological fluids, characterized in that it is conjugated to a metal chelator.

12. (withdrawn) A polymer according to claim 11, wherein the chelator is DFO or a DFO derivative.

13. (withdrawn) A polymer according to claim 11, wherein the polymer is selected from among polystyrene, polyethylene, polycarbonate, polyester

polymers and copolymers, polysaccharides, acrylate-based poly(hydroxamic acid), and polypeptides containing hydroxamate groups.

14. (withdrawn) A polymer according to claim 12 or 13, which is a DFO or DFO derivative conjugated to a polymer selected from polyacrylate, polyacrylate derivatives, polyacrylate copolymers, arabinogalactan, dextran, pullulan, cellulose and their derivatives.

15. (withdrawn) A kit for the determination of the concentration of a non-bound metal ion in a sample of serum or other biological fluids, comprising a surface coated with a polymer-conjugated form of a metal chelator.

16. (withdrawn) A kit according to claim 15, wherein the surface is a multiwell plate.

17. (withdrawn) A kit according to claim 15 or 16, wherein the surface is coated with a polymer conjugated with DFO or a DFO derivative.

18. (withdrawn) A kit according to claim 17, wherein the surface is coated with polymeric arabinogalactan-DFO or with hydroxyethyl starch-DFO conjugate.

19. (withdrawn) A kit according to claim 15, further comprising a marker conjugated with the same metal ion the concentration of which it is desired to determine.

20. (new) A method according to claim 1, wherein said non-bound metal ion and said additional metal ion are identical.

21. (new) A method according to claim 1, wherein said non-bound metal ion and said additional metal ion are different.